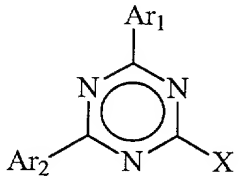
THE CLAIMS

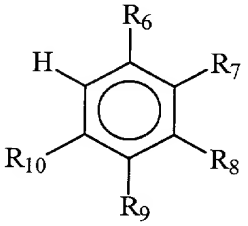
What is claimed is:

1. A process for synthesizing a triazine compound of Formula III:



Formula III

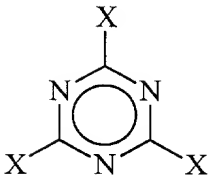
wherein X is a halogen and Ar_1 and Ar_2 are the same or different and each is a radical of a compound of Formula II:



Formula II

wherein R_6, R_7, R_8, R_9, and R_{10} are the same or different and each is hydrogen, halogen, alkyl of 1 to 24 carbon atoms, haloalkyl of 1 to 24 carbon atoms, aryl of 6 to 24 carbon atoms, alkenyl of 2 to 24 carbon atoms, acyl of 1 to 24 carbon atoms, aralkyl of 7 to 24 carbon atoms, aracyl of 6 to 24 carbon atoms, OR, NRR', CONRR', OCOR, CN, SR, SO_2R, SO_3H, SO_3M, wherein M is an alkali metal, R and R' are the same or different and each is hydrogen, alkyl of 1 to 24 carbon atoms, haloalkyl of 1 to 24 carbon atoms, aryl of 6 to 24 carbon atoms, alkenyl of 2 to 24 carbon atoms, acyl of 1 to 24 carbon atoms, cycloalkyl of 1 to 24 carbon atoms, cycloacyl of 5 to 24 carbon atoms, aralkyl of 7 to 24 carbon atoms, or aracyl of 6 to 24 carbons atoms, and optionally with either of R_6 and R_7, R_7 and R_8, R_8 and R_9, or R_9 and R_{10}, taken together being a part of a saturated or unsaturated fused carbocyclic ring optionally containing O, N, or S atoms in the ring, which comprises:

reacting a cyanuric halide of the Formula V:



Formula V

wherein each X is independently a halide selected from the group consisting of fluorine, chlorine, bromine and iodine, with at least one compound of Formula II with the reaction being conducted in the presence of a reaction facilitator comprising sufficient amounts of at least one Lewis acid and at least one reaction promoter for a sufficient time at a suitable temperature and pressure, optionally in the presence of at least one solvent, to produce a triazine compound of Formula III.

2. The process according to claim 1, wherein the Lewis acid is aluminum halide, boron halide, tin halide, zinc halide, lead halide, manganese halide, magnesium halide, copper halide, titanium halide, alkyl aluminum halide, gallium halide, iron halide, arsenic halide, antimony halide, or a mixture thereof.

3. The process according to claim 1, wherein the Lewis acid catalyst is aluminum chloride, aluminum bromide, boron trifluoride, tin chloride, zinc chloride, titanium tetrachloride, or a mixture thereof.

4. The process according to claim 1, wherein the reaction promoter is an acid, base, water, alcohol, aliphatic halide, halide salt, acid halide, halogen, alkene, alkyne, ester, anhydride, carbonate, urethane, carbonyl, epoxy, ether or acetal compound or a mixture thereof.

5. The process according to claim 1, wherein the solvent is heptane, carbon disulfide, cyclohexane, chlorobenzene, dichlorobenzene, trichlorobenzene, bromobenzene, dibromobenzene, tribromobenzene, toluene, xylene, trimethylbenzene, nitrobenzene, dinitrobenzene, anisole, nitroalkanes, heptane, cyclohexane, benzene, nitrobenzene, dinitrobenzene, toluene, xylene, 1,1,2,2-tetrachloroethane, dichloromethane, dichloroethane, ether, dioxane, tetrahydrofuran, benzonitriles, dimethylsulfoxide, tetramethylene sulfone, carbon disulfide, and benzene rings substituted with at least one halide including chlorobenzene, dichlorobenzene, trichlorobenzene, fluorobenzene, difluorobenzene, trifluorobenzene, bromobenzene, dibromobenzene, tribromobenzene, or mixtures thereof.

6. The process according to claim 1, further comprising forming the reaction facilitator before combining the mixture with the cyanuric halide of Formula V or the compound of Formula II.

7. The process according to claim 6, further comprising forming a mixture of the cyanuric halide of Formula V, the compound of Formula II, and a portion of the solvent before adding the reaction facilitator to the mixture.

8. The process according to claim 1, wherein the compound of Formula II is added between about 5 minutes to 15 hours and at a temperature between about -50°C to about 150°C and the reaction temperature is between about -50°C to about 150°C.

9. The process according to claim 1, wherein the Lewis acid is mixed with the cyanuric halide of Formula V prior to adding the reaction promoter.

10. The process according to claim 1, wherein the Lewis acid is mixed with the compound of Formula II prior to adding the reaction promoter.

11. The process according to claim 1, wherein the reaction promoter is mixed with the compound of Formula V prior to adding the Lewis acid.

12. The process according to claim 1, wherein the reaction promoter is mixed with the compound of Formula II prior to adding the Lewis acid.

13. The process according to claim 2, wherein the Lewis acid is present in an amount of about 1 to about 10 mol equivalents to the cyanuric halide of Formula V.

14. The process according to claim 4, wherein the reaction promoter is present in an amount of about 0.01 to 5 mol equivalents to the cyanuric halide of Formula V.

15. The process according to claim 4, wherein the reaction promoter is a protic acid.

16. The process according to claim 15, wherein the protic acid contains at least one acidic functional group including RCO_2H, RSO_3H, RSO_2H, RSH, ROH, RPO_3H, RPO_2H, wherein R is hydrogen, alkyl of 1 to 24 carbon atoms, haloalkyl of 1 to 24 carbon atoms, aryl of 6 to 24 carbon atoms, alkenyl of 2 to 24 carbon atoms, acyl of 1 to 24 carbon

atoms, cycloalkyl of 1 to 24 carbon atoms, cycloacyl of 5 to 24 carbon atoms, aralkyl of 7 to 24 carbon atoms, or aracyl of 6 to 24 carbons atoms.

17. The process according to claim 15, wherein the protic acid is HCl, HBr, HI, HNO_3, HNO_2, H_2S, H_2SO_4, H_3PO_4, H_2CO_3, acetic acid, formic acid, proprionic acid, butanoic acid, benzoic acid, phthalic acid, oxalic acid, malonic acid, succinic acid, glutaric acid, adipic acid, methanesulfonic acid, p-toluenesulfonic acid, or mixtures thereof.

18. The process according to claim 4, wherein the reaction promoter is water, acid, or a mixture thereof.

19. The process according to claim 4, wherein the reaction promoter is an aliphatic halide.